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momentary target range and  $\Delta E$  is a value corresponding to the range error. The range error is determined by calculating the intersection of the projectile trajectory (F) with the line of sight (V).

## (54) Method for evaluating offset of point of impact of projectile in gun trainer or simulator

(57) The method evaluates the vertical offset  $\Delta H$  of the simulated point of impact (X) of the projectile with respect to a target (Z) onto which a sight is aligned, and displays the offset according to the function  $\Delta H = k_1 \cdot k_2 \cdot \Delta E$ , where  $k_1$  is a factor dependent on the type of ammunition,  $k_2$  is a factor dependent on

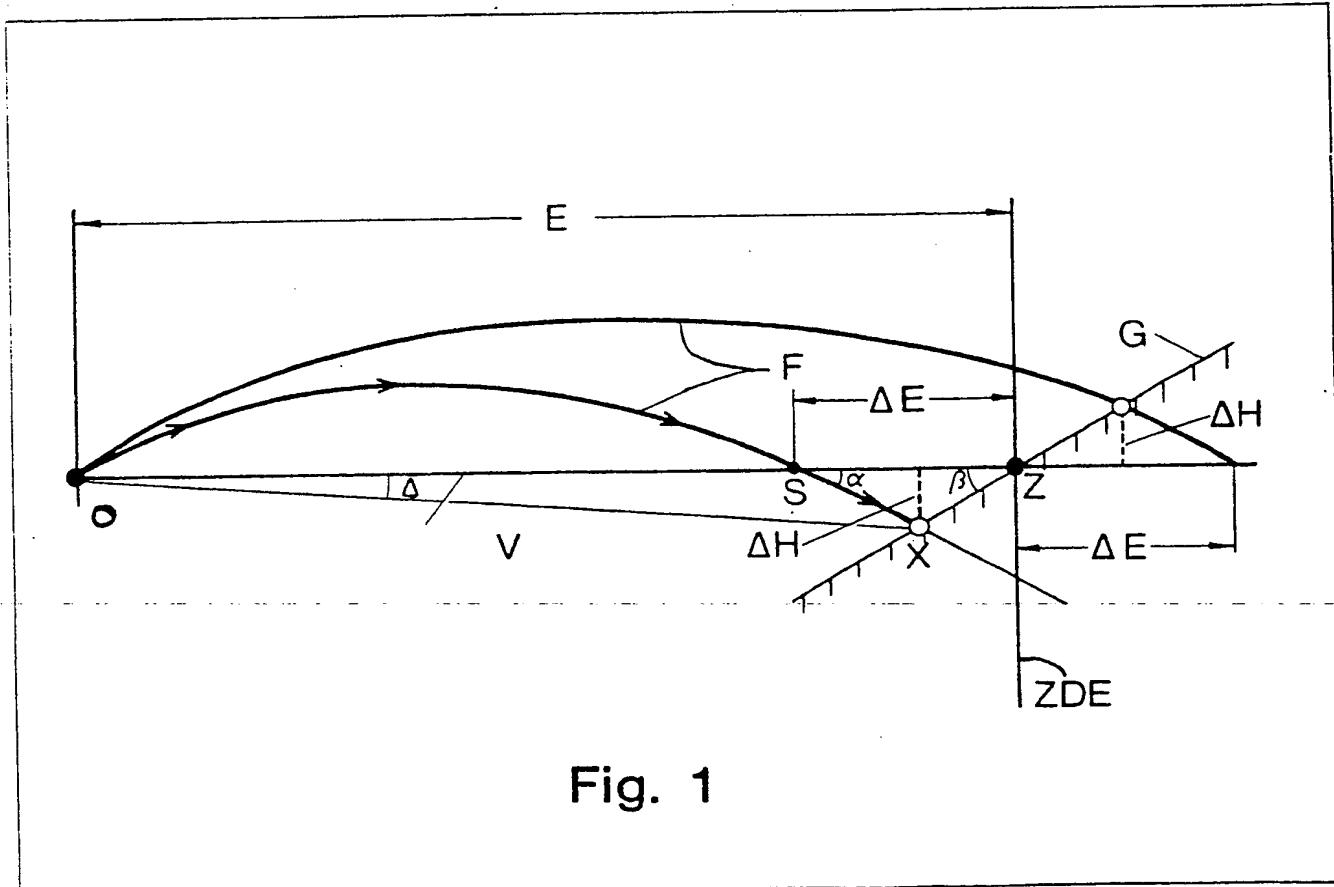


Fig. 1

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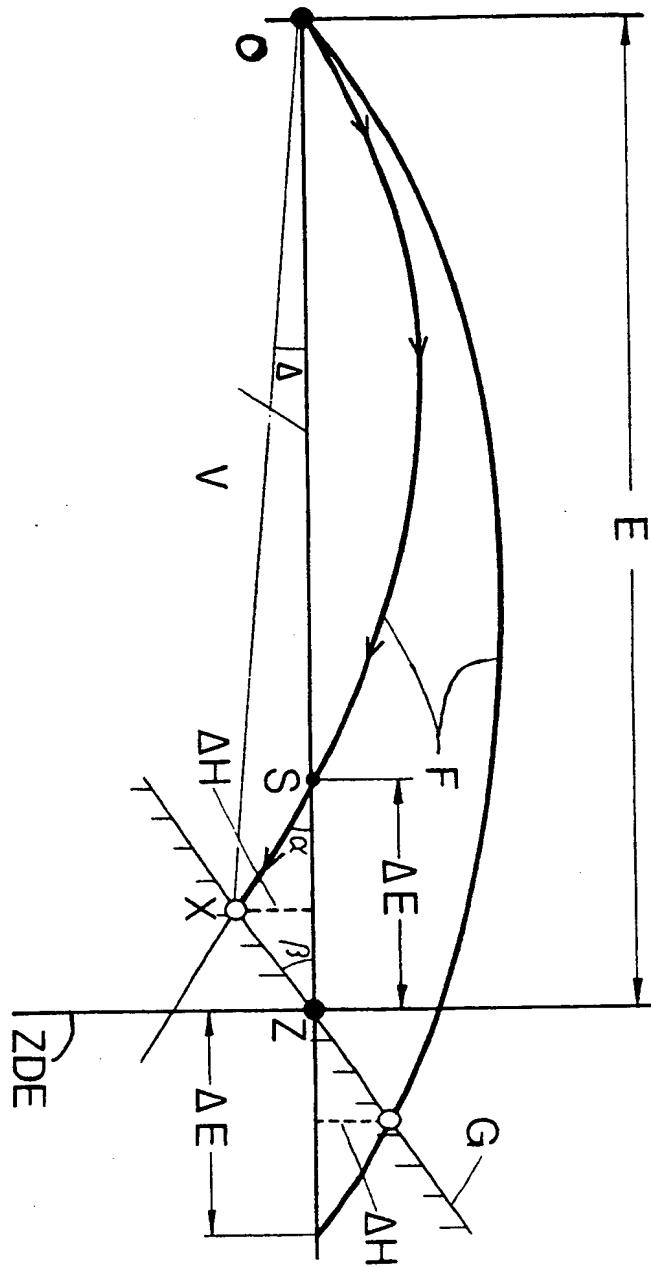


Fig. 1

$\Delta H / \Delta E$

$\times 10^3$

80

70

50

40

30

20

10

0

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$\alpha = 74^\circ$

$E = 2500 \text{ m}$

$\alpha = 48^\circ$

$E = 2000 \text{ m}$

$\alpha = 28,4^\circ$

$E = 1500 \text{ m}$

5

10

15

20

25

30

$\beta$

Fig. 2

projectile with respect to a target onto which a sight is aligned, wherein the vertical offset of the simulated point of impact (X) of the projectile relative to the target (Z) is displayed according to the function  $\Delta H = k_1 \cdot k_2 \cdot \Delta E$  where

- 5     $\Delta H$    = vertical offset,  
       $k_1$    = factor, dependent on type of ammunition,  
       $k_2$    = factor, dependent on momentary target range,  
       $\Delta E$    = range error.

- 10    2. Method according to Claim 1, wherein the range error  $\Delta E$  is determined by calculating  
the intersection of the projectile trajectory (F) with the line of sight (V).  
3. A gun trainer or simulator method substantially as herein described.

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